

## ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE ER REGULATORY CONTACT RECORD

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<b>Date/Time:</b>	April 14, 2005			
<b>Site Contact(s):</b>	Julie Keating			
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	K-H RISS			
<b>Regulatory Contact:</b>	Carl Spreng	Tracy Hammon	Robyn Blackburn	Susan Griffin
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<b>Agency:</b>	CDPHE	CDPHE	USEPA	USEPA

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**Purpose of Contact:** Documentation of Background Data Set and Statistical Comparisons of Site Data to Background Data

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### Discussion

During a meeting of the Risk Assessment Working Group on March 24, 2005, alternate approaches to defining background data sets and performing statistical comparisons of Exposure Unit (EU/Aquatic Exposure Unit (AEU) data to the background data were discussed. These approaches refined those defined in the Comprehensive Risk Assessment (CRA) Work Plan and Methodology (DOE 2004). In a meeting between Julie Keating (K-H RISS), Robyn Blackburn (USEPA), Tracy Hammon (CDPHE), and Susan Griffin (USEPA) on April 4, 2005, a final approach was defined and is described herein.

Background data for the site were collected under two programs, and are summarized in two separate reports. Surface soil background data are summarized in the Geochemical Characterization of Background Surface Soils: Background Soils Characterization Program (BSCP) (DOE 1995). Background data for all other environmental media are summarized in the Background Geochemical Characterization Report (BGCR) (DOE 1993).

For surface soil, the CRA will use only BSCP data for background comparisons. These surface soil sample locations are not on site.

For subsurface soil, stream sediment, and stream surface water, the CRA will use most of the BGCR sample locations. Per our discussion on April 4, data for three downstream sampling locations will be removed from the BGCR background data set; SW004/SED022 and SW108/SED021 in the Rock Creek drainage, and SW041/SED041/SED017 in the Woman Creek drainage (see attached map). For all remaining BGCR background sampling locations, all BGCR data will be used as well as all data collected through 2004 at these locations (applicable to surface water and sediment sampling). The BGCR sampling locations are all on site. Please note that only sediment and surface water data for streams, and not seeps, are used for background data. SED018, SED019, and SW131 in the Antelope Springs area of the Woman Creek drainage were removed because these sampling locations are associated with seeps.

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Background data sets will be recalculated for surface soil, subsurface soil, sediment (all depths), surface soil combined with surface sediment (end depth 6 inches or less), subsurface soil combined with subsurface sediment (end depth greater than 6 inches), surface water (total concentrations), and surface water (dissolved concentrations). The combined surface soil/surface sediment and the subsurface soil/subsurface sediment background data sets will be developed because the data for these media are combined on an EU basis to select Contaminants of Concern (COCs) in evaluating risk to human receptors. The determination of the COCs requires a comparison of EU data to the appropriate background data set.

In determining COCs and Ecological Contaminants of Potential Concern (ECOPCs), EU and AEU data will be statistically compared to the appropriate background data set to determine if the analytes are at concentrations within background levels in the EU/AEU. Before performing the statistical comparison, background data for locations within an EU/AEU will be removed from the EU/AEU data set, as appropriate. For COCs, the background data will be reaggregated with the EU/AEU data for calculation of the Exposure Point Concentrations (EPCs).

**References:**

DOE, 1993, Background Geochemical Characterization Report, Rocky Flats Environmental Technology Site, Golden, Colorado, September.

DOE, 1995, Geochemical Characterization of Background Surface Soils: Background Soils Characterization Program, Rocky Flats Environmental Technology Site, Golden, Colorado, May.

DOE, 2004, Final Comprehensive Risk Assessment Work Plan and Methodology, Rocky Flats Environmental Technology Site, Golden, Colorado, September.

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**Contact Record Prepared By: Julie Keating**

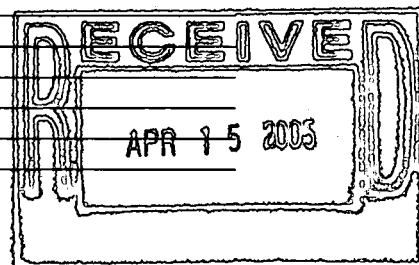
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# **Sediment and Surface Water Background Sampling Locations for the CRA**

## **KEY**

- ⊙ Removed background location
- BGC sample location
- Sediment
- Surface water
- - - Site boundary
- ▬ Paved road
- ~ Stream
- ▨ Lake or pond

**DRAFT**



Scale = 1:35,000  
1000 0 1000 2000 Feet

State Plane Coordinate Projection  
Colorado Central Zone  
Datum: NAD 27

U.S. Department of Energy  
Rocky Flats Environmental Technology Site

Prepared by: Date: 04/25

Prepared for:



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